riparian forest along the lower Truckee River will be lost [illegible] not occurring sufficiently to replace them.

Preservation of the remaining riparian forest fragments [illegible] plantings to assure the long-term replacement of the mature forest stands are necessary steps, but these alone are not sufficient to [illegible] integrity of the riparian forest ecosystem of the lower Truckee River. [illegible] flood flows and appropriate seasonal distribution of water are [illegible] the natural regeneration of the riparian forest, the instream flow necessary to maintain riparian vegetation is also an important component. The [illegible] category assigned to Fremont's cottonwood in the Intermountain Region and California is FAC (Reed [illegible]), but recent studies in Arizona have shown that the species is [illegible] a phreatophyte, [illegible] groundwater [illegible]. [illegible]

[illegible]

[illegible]

It should be possible to find what the distribution is for a given population. If the object is known to belong to a certain group, it should be possible to predict its characteristics. In the case of the Iris flower, the petal length and width are known to be correlated. As the petal length increases, the petal width also increases. This is a very useful property because it allows us to predict the petal width of a flower if we know its petal length. This is useful because it is often easier to measure the petal length than the petal width. Although this is not always the case, it appears that for most species of flowers, the petal length is a good predictor of the petal width. This is useful because it allows us to predict the petal width of a flower if we know its petal length. This is useful because it allows us to predict the petal width of a flower if we know its petal length. This is useful because it allows us to predict the petal width of a flower if we know its petal length.

Validation Study of Results

Typical flow cytometry data are displayed as a two-dimensional plot, with one fluorescence parameter on the horizontal axis and another on the vertical axis. Each point represents one cell, and the density of points in different regions of the plot reveals the relative abundance of cell populations with different marker profiles. The first step in analyzing such data is usually to draw boundaries around the clusters of points that appear to belong to distinct populations. This process, known as gating, can be performed manually by an experienced operator who inspects the plot visually, or automatically by software algorithms that attempt to find the clusters mathematically. Both approaches have their advantages and disadvantages, and the choice between them depends on the size of the dataset, the number of parameters measured, and the degree of separation between the populations of interest.

Experimental Procedure

Although human T cell responses were successfully detected in the vaccinated mice, the magnitude of the response was much lower than in the mouse studies. Only two of the nine vaccinated subjects showed a response greater than the threshold value of 0.1% IFN-γ+ cells among CD8+ T cells. The remaining seven subjects showed responses that were indistinguishable from the background level of unstimulated cells. The mean response in the vaccinated group was 0.08% IFN-γ+ cells, which was not significantly different from the mean response of 0.05% in the placebo group. This result was disappointing, but it was not entirely unexpected. Previous studies had also reported that human responses to this vaccine were much weaker than those observed in mice. The reasons for this species difference are not well understood, but may include differences in the expression of the receptor used by the vaccine vector to enter cells, differences in the processing and presentation of the antigen by antigen-presenting cells, and differences in the pre-existing immunity to the vaccine vector in the human population. Because the vaccine vector is derived from a virus that infects primates, it is possible that many of the human subjects had been exposed to the virus or to a closely related virus before the study began, and had developed neutralizing antibodies that could block the vaccine from entering cells. This pre-existing immunity would not be a problem in mice, which have never been exposed to the virus.

[illegible] [illegible] [illegible] [

Impacts Analysis

As noted in the limitations discussed in detail in the **Introduction** of this report, the preliminary model in **Appendix E** can be used for calibration and validation purposes by running it in combination with available historical climatological data for the duration of the Eyre Lake water quality monitoring program. The model is then driven by observed meteorological data and the results compared to observed water quality data. For example, the model could be used to predict the water level in Eyre Lake during the monitoring period. Long duration time series of lake water quality parameters (e.g., chlorophyll *a*, total phosphorus, etc.) can be used to verify the model's ability to predict the observed trends. These information will be used during discussions with the public to help determine the appropriate level of complexity for the lake model. Ultimately, we will better define the interactions of the hydrologic simulations with the nutrient vulnerability model. The level of complexity of this model can be determined from discussions with the public, data availability, evaluation of the model's performance, and the sensitivity of the model to certain parameters.

Purpose and Overview

The purpose of the activity was to assess the suitability of the Delaware River estuary for supporting the Atlantic sturgeon. The investigation began the project's habitat suitability assessment (HSA) work. HSA data calculated baseline ecological conditions and also helped to identify areas where additional study was needed.

HSA is a habitat-based method of ecological assessment that quantifies the ability of habitat to support fish and wildlife species. The HSA process involves identifying species or guilds to serve as indicators of the health of the habitat being studied. A model is built for each species or guild, describing how it uses habitat resources. The model is then used to produce a habitat suitability index (HSI) that numerically describes the habitat's capacity to support the species of interest.

Habitat quality is rarely consistent. For example, the Delaware Estuary is "good habitat" for many species, but for the study area, habitat quality varies greatly from one species to another. Each species has its own preferences for water depth, water velocity, bottom type, salinity, and other factors. Habitat quality is also affected by the presence of predators, competitors, and food. Some species are more tolerant of poor water quality than others. Habitat quality can also change over time. For example, the Delaware Estuary is naturally getting shallower as sediment is deposited from upstream. Dredging can maintain deeper depths, but dredging is not permanent. Dredged areas will fill in over time.

Some species have different habitat needs at different life stages. For example, adult striped bass migrate from the ocean to freshwater to spawn, but the young fish live in the estuary for several years before migrating to the ocean. Habitat suitability is often described differently for each life stage of a species. For example, adult striped bass may prefer deep water, while juveniles may prefer shallower areas. Habitat suitability can also change with the season. For example, striped bass may use deep water habitat in the summer to avoid warm surface waters, but move to shallower areas in the winter to feed.

Evaluating habitat suitability for multiple species and life stages can be difficult. Sometimes, habitat suitability conflicts. For example, a habitat may be suitable for one species but unsuitable for another. Habitat suitability may also change over time. For example, a habitat may be suitable for a species at one life stage but unsuitable for another life stage. Habitat suitability may change with the season. For example, a habitat may be suitable for a species in the summer but unsuitable in the winter. Habitat suitability may change with the availability of food. For example, a habitat may be suitable for a species when food is abundant but unsuitable when food is scarce. Habitat suitability may change with the presence of predators. For example, a habitat may be suitable for a species when predators are absent but unsuitable when predators are present. Habitat suitability may change with the presence of competitors. For example, a habitat may be suitable for a species when competitors are absent but unsuitable when competitors are present.

[illegible]

Assumptions

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

4. [illegible]

5. [illegible]

6. [illegible]

Resource Objectives

[illegible]

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]

Evaluation Species Selection

To further the HSI objective evaluation, nine more species were selected for use in the evaluation application and sample runs. A preliminary list was compiled of potential wildlife species likely visible and obtainable in the Colorado Rocky Mountain Front Range area. Species were selected from this list based on their relative importance to the area and availability of habitat information. Habitat information was gathered from the Fish and Wildlife Service, the Federal government, the State of Colorado, and various other sources.

A total of eight species were selected. The criteria used to select the evaluation species are listed below:

1. The species must have a relatively high probability of occurrence in the study area.
2. The species will likely be impacted by the project being studied.
3. Sufficient data must be available to develop suitability criteria and to run or help develop the HSI model. Species with insufficient data were not selected.
4. The habitat variables modified by the study alternatives should be habitat used by the evaluation species.
5. The evaluation species will use the habitat types that were identified as dependent.
6. The species should be an economically, recreationally, or ecologically important species.
7. The species has the potential to respond to management activities in the potential mitigation areas.
8. The species must be native to the area.

Seven HSI models were used without modifications. Two HSI models were modified to meet the study objectives. The seven models that were used for the evaluation species were: Bobcat, Mule Deer, Red-tailed Hawk, Belted Kingfisher, Broad-tailed Hummingbird, Yellow Warbler and Wilson's Warbler. A description of the species and their habitat requirements follow. Bobcat and American Kestrel were evaluated for the Colorado Division of Wildlife. Mountain Bluebird, Lazuli Bunting and Yellow Warbler were evaluated for the Bureau of Land Management. Mule Deer was evaluated for both agencies. Habitat variables used in each species HSI model are listed in **Table XV.**

Table XV. Evaluation species, habitat types, model variables and cover types used in the Habitat Evaluation Procedures (HEP) analysis.

Evaluation Species	Habitat Type	HEP Model Variables	Cover Type
1. Wilson's Warbler	Cottonwood-Pine	% shrub cover	Mixed Pine
		% overstory canopy cover	Black Cottonwood
		% herb cover (>6")	
2. Western Wood-Pewee	Cottonwood-Pine	Habitat stage	Mixed Pine
		Distance from edge	Black Cottonwood
3. Yellow Warbler	Cottonwood/Willow	% deciduous shrub canopy cover	Fremont's Cottonwood
		Average height deciduous shrub canopy	Alder Willow
		Deciduous shrub canopy, hydrophytic	Mixed Willow
4. Northern Oriole	Cottonwood/Willow	Average height deciduous tree canopy	Fremont's Cottonwood
		% deciduous tree canopy cover	Alder Willow
		Stand width	Mixed Willow
5. American Kestrel	Cottonwood-Pine	% bare ground	
	Cottonwood/Willow	% herbaceous cover <= 12" tall	Black Cottonwood
		% shrub cover <= 16.5"	Fremont's Cottonwood
		Number perch sites	
		Vegetative structure	
		Number of nest sites/acre	
		Distance to nest	
		Distance to food	
6. Mink	Riverine	% year with surface water	Riverine
		% tree/shrub canopy cover within 100m (328 feet) of water or wetland edge	Emergent
7. Muskrat	Riverine	% stream gradient	Riverine
		% riverine channel with surface water present during typical minimum flow	Emergent
		% channel dominated by emergent herbaceous vegetation	
		% herbaceous cover within 10m (32.8 feet) water's edge	
8. Sage Thrasher	Sagebrush Uplands	% canopy cover (shrub)	Upland Shrub
		Average shrub height	
		Evergreen shrub type	

Field Methodology

[illegible] **Floodplain and Channel Bank Mapping.** [illegible] **Project Reaches and Field Sites** [illegible] **Table V:**

Baseline Analysis

[illegible] **Table XV** [illegible] **Appendix F.**

Table XVI presents [illegible] by [illegible] species and habitat type [illegible]. [illegible] **Table XVII**, which presents the [illegible] by [illegible] species habitat types. [illegible] Habitat [illegible] project [illegible] "Total Acres" in the [illegible] habitat type [illegible] evaluation species [illegible]. For example, in Reach [illegible] Wilson's warbler and the [illegible] evaluate the same [illegible] acres of [illegible]. [illegible] yellow warbler and northern oriole evaluate the same [illegible] acres of [illegible] habitat. [illegible] riparian forest [illegible] Willow [illegible] forest.

The remainder of this [illegible] is devoted to [illegible] habitat types [illegible] and the species which were chosen to evaluate them.

[illegible] Forest: Wilson's warbler and Western [illegible]

[illegible] and Wilson's warbler were [illegible] only the [illegible] forest [illegible] by black [illegible]. These two species are [illegible]. The [illegible] habitat was not [illegible] (Table [illegible]) [illegible] HSI values for both species from the [illegible] were used for [illegible].

[illegible] HSI values [illegible] (**Table XVIII**). [illegible] species. [illegible] from [illegible]. The "[illegible]" variable was deemed [illegible] HSI.

Wilson's warbler HSI values [illegible] higher than those for the western [illegible] due to the [illegible] HSI value of [illegible] "[illegible]" and "[illegible]" were at or near optimum (**Table XVIX**). [illegible] Wilson's warbler. [illegible] black [illegible] between [illegible].

Table XVI. Baseline Habitat Suitability Indices (HSI), total acres and total habitat units (HU) by evaluation species and by reach. Derived from Habitat Evaluation Procedures (HEP) analysis of the Lower Truckee River.

	Wilson's Warbler Cottonwood-Pine	**Avg HSI**	**Total Acres**	**Total HU's**
REACH 1	Lake Tahoe to Boca	0.468	11.00	5.15
REACH 2	Boca to Stateline	0.738	24.79	18.30
REACH 3	Stateline to Vista gauge	0.738	31.72	23.41
REACH 4	Vista to Derby Dam	0.174	0.00	0.00
REACH 5	Derby Dam to Wadsworth	0.174	0.00	0.00
REACH 6	Wadsworth to Dead Ox Wash	0.000	0.00	0.00
REACH 7	Dead Ox Wash to Numana	0.000	0.00	0.00
REACH 8	Numana to Marble Bluff	0.000	0.00	0.00
	Western Wood-pewee Cottonwood-Pine	**Avg HSI**	**Total Acres**	**Total HU's**
REACH 1	Lake Tahoe to Boca	0.492	11.00	5.41
REACH 2	Boca to Stateline	0.357	24.79	8.85
REACH 3	Stateline to Vista gauge	0.357	31.72	11.32
REACH 4	Vista to Derby Dam	0.000	0.00	0.00
REACH 5	Derby Dam to Wadsworth	0.000	0.00	0.00
REACH 6	Wadsworth to Dead Ox Wash	0.000	0.00	0.00
REACH 7	Dead Ox Wash to Numana	0.000	0.00	0.00
REACH 8	Numana to Marble Bluff	0.000	0.00	0.00
	Yellow Warbler Cottonwood/Willow	**Avg HSI**	**Total Acres**	**Total HU's**
REACH 1	Lake Tahoe to Boca	0.421	28.15	11.85
REACH 2	Boca to Stateline	0.403	26.38	10.63
REACH 3	Stateline to Vista gauge	0.529	73.46	38.86
REACH 4	Vista to Derby Dam	0.455	39.09	17.79
REACH 5	Derby Dam to Wadsworth	0.455	53.54	24.36
REACH 6	Wadsworth to Dead Ox Wash	0.573	84.00	48.13
REACH 7	Dead Ox Wash to Numana	0.573	2.02	1.16
REACH 8	Numana to Marble Bluff	0.573	62.11	35.59
	Northern Oriole Cottonwood/Willow	**Avg HSI**	**Total Acres**	**Total HU's**
REACH 1	Lake Tahoe to Boca	0.085	28.15	2.39
REACH 2	Boca to Stateline	0.678	26.38	17.89
REACH 3	Stateline to Vista gauge	0.363	73.46	26.67
REACH 4	Vista to Derby Dam	0.601	39.09	23.49
REACH 5	Derby Dam to Wadsworth	0.601	53.54	32.18
REACH 6	Wadsworth to Dead Ox Wash	0.645	84.00	54.18
REACH 7	Dead Ox Wash to Numana	0.645	2.02	1.30
REACH 8	Numana to Marble Bluff	0.645	62.11	40.06

	American Kestrel Cottonwood-Pine, Cottonwood/Willow	Avg HSI	Total Acres	Total HU's
REACH 1	Lake Tahoe to Boca	0.140	1 43	0 20
REACH 2	Boca to Stateline	0.468	19 66	9 20
REACH 3	Stateline to Vista gauge	0.198	48 59	9 62
REACH 4	Vista to Derby Dam	0.000	17 95	0 00
REACH 5	Derby Dam to Wadsworth	0.000	26 17	0 00
REACH 6	Wadsworth to Dead Ox Wash	0 000	37 90	0 00
REACH 7	Dead Ox Wash to Numana	0.000	0 00	0 00
REACH 8	Numana to Marble Bluff	0 000	19.70	0 00

	Mink Riverine	Avg HSI	Total Acres	Total HU's
REACH 1	Lake Tahoe to Boca	0 780	47 01	36 67
REACH 2	Boca to Stateline	0 926	29.61	27 42
REACH 3	Stateline to Vista gauge	0 840	56.76	47.68
REACH 4	Vista to Derby Dam	0 748	60 15	44.99
REACH 5	Derby Dam to Wadsworth	0 748	25.03	18 72
REACH 6	Wadsworth to Dead Ox Wash	0 733	21.34	15.64
REACH 7	Dead Ox Wash to Numana	0 733	14.44	10.58
REACH 8	Numana to Marble Bluff	0 733	19.23	14 10

	Muskrat Riverine	Avg HSI	Total Acres	Total HU's
REACH 1	Lake Tahoe to Boca	0 40	47 01	18.69
REACH 2	Boca to Stateline	0.53	29 61	9 79
REACH 3	Stateline to Vista gauge	0.42	56.76	23.65
REACH 4	Vista to Derby Dam	0 45	60 15	27.31
REACH 5	Derby Dam to Wadsworth	0.45	25.03	11.36
REACH 6	Wadsworth to Dead Ox Wash	0.50	21 34	10.60
REACH 7	Dead Ox Wash to Numana	0.50	14.44	7.17
REACH 8	Numana to Marble Bluff	0.50	19 23	9.55

	Sage Thrasher Sagebrush Uplands	Avg HSI	Total Acres	Total HU's
REACH 1	Lake Tahoe to Boca	0 535	1 93	1 03
REACH 2	Boca to Stateline	0 519	12.36	6 41
REACH 3	Stateline to Vista gauge	0 370	2.27	0 84
REACH 4	Vista to Derby Dam	0 791	34 00	26 89
REACH 5	Derby Dam to Wadsworth	0 791	20 01	15 83
REACH 6	Wadsworth to Dead Ox Wash	0 329	28 36	9.33
REACH 7	Dead Ox Wash to Numana	0.329	12 15	4 00
REACH 8	Numana to Marble Bluff	0 329	46.11	15.17

Table XVII. Baseline Habitat Suitability Indices (HSI), total acres and total habitat units (HU) by reach and by evaluation species. Derived from Habitat Evaluation Procedures (HEP) analysis of the Lower Truckee River.

REACH 1 Lake Tahoe to Boca	Avg HSI	Total Acres	Total HU's
Wilson's Warbler	0.468	11 00	5.15
Western Wood-pewee	0.492	11 00	5.41
Yellow Warbler	0.421	28.15	11 85
Northern Oriole	0 085	28.15	2 39
American Kestrel	0.140	1.43	0 20
Mink	0.780	47.01	36 67
Muskrat	0.400	47.01	18 69
Sage Thrasher	0.535	1 93	1 03

REACH 2 Boca to Stateline	Avg HSI	Total Acres	Total HU's
Wilson's Warbler	0 738	24.79	18 30
Western Wood-pewee	0 357	24.79	8 85
Yellow Warbler	0 403	26 38	10 63
Northern Oriole	0 678	20 38	17 80
American Kestrel	0 468	10.66	9 20
Mink	0 926	29.61	27 42
Muskrat	0 330	29.61	9 78
Sage Thrasher	0 519	12.36	6 41

REACH 3 Stateline to Vista	Avg HSI	Total Acres	Total HU's
Wilson's Warbler	0 738	31.72	23.41
Western Wood-pewee	0.357	31 72	11 32
Yellow Warbler	0 529	73 46	38 85
Northern Oriole	0 363	73 46	26 67
American Kestrel	0 198	46 59	9.02
Mink	0 840	56 70	47 68
Muskrat	0.420	56 76	23.85
Sage Thrasher	0 370	2 27	0.84

REACH 4 Vista to Derby Dam	Avg HSI	Total Acres	Total HU's
Wilson's Warbler	0.174	0 00	0 00
Western Wood-pewee	0 000	0 00	0 00
Yellow Warbler	0.455	39 09	17 79
Northern Oriole	0 601	39 09	23 49
American Kestrel	0 000	17 95	0 00
Mink	0 748	60 15	44 99
Muskrat	0.450	60 15	27 31

Sage Thrasher	0.791	34 00	26 89

REACH 5 **Derby Dam to Wadsworth**	**Avg HSI**	**Total Acres**	**Total HU's**
Wilson's Warbler	0.174	0.00	0.00
Western Wood-pewee	0.000	0 00	0.00
Yellow Warbler	0 455	53.54	24.36
Northern Oriole	0 601	53 54	32 18
American Kestrel	0.000	26.17	0 00
Mink	0.748	25 03	18 72
Muskrat	0.450	25.03	11 36
Sage Thrasher	0 791	20 01	15 83

REACH 6 **Wadsworth to Dead Ox Wash**	**Avg HSI**	**Total Acres**	**Total HU's**
Wilson s Warbler	0 000	0 00	0 00
Western Wood pewee	0 000	0 00	0 00
Yellow Warbler	0 573	84 00	48 13
Northern Oriolu	0 645	84 00	54 18
American Kestrel	0 000	37 90	0 00
Mink	0 733	21.34	15 64
Muskrat	0 500	21.34	10 60
Sage Thrasher	0 329	28 36	9 33

REACH 7 **Dead Ox Wash to Numana Dam**	**Avg HSI**	**Total Acres**	**Total HU's**
Wilson s Warb or	0 000	0 00	0 00
Western Wood-pewee	0 000	0 00	0 00
Yellow Warbler	0 573	2 02	1 16
Northern Oriole	0 645	2.02	1 30
American Kestrel	0 000	0 00	0 00
Mink	0 733	14.44	10 58
Muskrat	0 500	14 44	7 17
Sage Thrasher	0.329	12 15	4 00

REACH 8 **Numana Dam to Marble Bluff**	**Avg HSI**	**Total Acres**	**Total HU's**
Wilson's Warb or	0 000	0.00	0 00
Western Wood-pewee	0 000	0 00	0 00
Yellow Warbler	0 573	62 11	35 59
Northern Oriole	0 645	62 11	40 06
American Kestrel	0 000	19 70	0 00
Mink	0 733	19 23	14 10
Muskrat	0 500	19 23	9 55
Sage Thrasher	0 329	46 11	15 17

Table XVIII. Field Data values, Habitat Evaluation Procedure model Suitability Indices (SI), and overall Habitat Suitability Indices (HSI) for Western wood-pewee (Cottonwood-Pine Habitat)

	value	habitat stage SI	distance to edge SI	HSI
Amargas	1-2	07	1 0	173
Bridge	mixed	33	1 0	451
Granite	4C	.45	1 0	588
Martis	4A	.77	1 0	840
Boca	wt avg	228	1 0	.377
Reach 1				**.492**
Farad	2	0	1 0	0
Verd	3B	.6	1 0	.714
Reach 2				**.357**
Oxbow	.018	0	1 0	0
Spice I	2	0	1 0	0
Reach 3 (used value of reach 2)				**0**
Clark	2	0	1 0	0
Reach 4				**0**
Powerline	2	0	1 0	0
Reach 5				**0**

Table XVIX. Field Data values, Habitat Evaluation Procedure model Suitability Indices (SI), and overall Habitat Suitability Indices (HSI) for Wilson's warbler (Cottonwood-Pine Habitat)

	% shrub cover		% overstory		% herbs >6"		
	value	SI	value	SI		SI	HSI
Amargas	18.8	.750	3.8	.190	43.6	.385	.590
Bridge	23.2	.928	26.7	1.0	27.9	.198	.643
Granite	21.0	.840	12.1	.605	29.4	.235	.553
Martis	0	0	4.9	.245	17.3	0	0
Boca	21.2	.848	0	0	29.0	.225	.545
Reach 1							**.468**
Farad	39.9	1.0	5.8	.290	38.3	.456	.594
Verdi	25.4	1.0	44.4	.934	45.6	.645	.881
Reach 2							**.738**
Oxbow	72.7	.660	0	0	17.7	0	0
Spice I.	17.5	.700	0	0	19.9	0	0
Reach 3 (used value of reach 2)							**0**
Clark	6.7	.268	0	0	22.9	.073	.174
Reach 4							**.174**
Powerline	3.8	.152	0	0	16.7	0	0
Reach 5							**0**

[illegible]

[illegible] **(Table XX)**. [illegible] **Table XXI)**.

Table XX. Field Data values, Habitat Evaluation Procedure model Suitability Indices (SI), and overall Habitat Suitability Indices (HSI) for Yellow warbler (Cottonwood/Willow Habitat)

	% deciduous shrub canopy cover value	SI	Avg height deciduous shrub canopy cover value	SI	% deciduous shrub canopy, hydrophytic value	SI	HSI
Amergas	90.6	.788	1.26	.629	100	1.0	.704
Bridge	32.9	.559	.91	.476	96.2	.966	.508
Granite	45.3	.770	.65	.325	99.5	.996	.499
Martis	0	0	0	0	0	[illegible]	0
Boca	39.3	.668	.47	.236	100	1.0	.396
Reach 1							.421
Farad	39.0	.663	.761	.381	96.9	.972	.496
Verdi	24.7	.420	.458	.229	100	1.0	.310
Reach 2							.404
Oxbow	65.3	1.0	.95	.475	100	1.0	.689
Spice I	20.9	.355	.76	.383	100	1.0	.369
Reach 3							.529
Clark	42.8	.728	.72	.36	76.6	.769	.455
Reach 4							.455
Powerline	27.6	.469	1.38	.70	100	1.0	.573
Reach 6							.573

[illegible]

[illegible] **(Table XXII)**. [illegible]

Virtual RAM volumes are created by the value of the Expiration Time in the Variables. It can also be used to prevent variables in the existing model in case the value fails to match the Expiration Variables.

[illegible]

Table XXI. Field Data values, Habitat Evaluation Procedure model Suitability Indices (SI), and overall Habitat Suitability Indices (HSI) for Northern oriole (Cottonwood-Pine Habitat).

	Avg Height deciduous tree canopy cover		% deciduous tree canopy cover		Stand width	
	value	SI	value	SI	SI	HSI
Amergas	0	0	0	0	0	0
Bridge	0	0	0	0	0	0
Granite	81.0	1.0	5.7	.228	333	424
Martis	0	0	0	0	0	0
Boca	0	0	0	0	0	0
Reach 1						.085
Farad	27.0	77	5.8	.232	400	.415
Verdi	45.5	1.0	44.4	1.0	833	.941
Reach 2						.678
Oxbow	72.0	1.0	12.7	.508	.750	725
Spice I.	0	0	0	0	.250	0
Reach 3						.363
Clark	59.[illegible]	1.0	15.5	620	.350	.601
Reach 4						.601
Powerline	63.6	1.0	11.8	472	567	.645
Reach 6						.645

[illegible]

[illegible] **(Table XXIII)**. [illegible]

[illegible] **(Table XXIV)**. [illegible]

Table XXII. Field Data values, Habitat Evaluation Procedure model Suitability Indices (SI), and overall Habitat Suitability Indices (HSI) for American Kestrel (Cottonwood-Pine and Cottonwood/Willow Habitats)

	% herbaceous cover < 12"		% bareground		% shrub canopy cover		
	value	SI	value	SI	value	SI	HSI
Amargas	1664	548	.263	.526	18 8	1 0	->
Bridge	2926	.967	346	.692	23 2	1 0	->
Granite	.2377	784	.176	.352	21 C	1 0	->
Martis	.2522	.832	538	1 0	C.0	1.0	->
Boca	0	C	197	394	21 2	1.0	->
Farad	0052	017	288	576	30 9	.869	->
Verdi	0744	246	234	468	25 4	1.0	->
Oxbow	16	528	444	88	72 7	.390	->
Spice I	0412	136	072	144	17 5	1 C	->
Clark	0	0	465	97	6 7	1.C	->
Powerline	0	0	410	.82	3 8	1.C	->

	# perch vegetative site structure		# nest sites	distance to nest	distance to food	
	SI	SI	SI	SI	SI	HSI
Amargas	1 0	5	1 0	1 0	1 0	0
Bridge	1 0	5	1.0	1 0	1 0	699
Granite	1 0	0	0	1 0	1 0	C
Martis	1.0	1.0	1.0	1.0	1 0	0
Boca	1.0	5	0	0	1 0	0
Reach 1						**.140**
Farad	0 5	5	1 0	1 0	1 0	297
Verd	1.0	1 0	1 0	1 0	1 0	645
Reach 2						**.468**
Oxbow	1.0	0	1.0	1 0	1.0	0
Spice I	1.0	5	1.0	1.0	1.0	396
Reach 3						.198
Clark	1 0	0	1 0	1 0	1 0	0
Reach 4						**0**
Powerline	0	0	0	1.0	1.0	0
Reach 5						**0**

The value of "percent of channel with riparian woody habitat type of moderate flow" was the greatest influence on the HSI values. Upstream of Canby Dam values ranged from moderate flow to intermittent flow because of Canby Dam releases. Downstream of Canby Dam values ranged from moderate flow to intermittent flow because of the Canby Dam. The highest value computed was for the lower reaches of the Farad - Verdi habitat because of the dam. Except for about 50 yards of a perennial tributary in Reach 1, all other habitat was intermittent flow typical of the Canby Dam releases.

An "optimum" HSI value is defined by ecological literature as a "1". In this case, the highest HSI value was determined to be "1" per reach of habitat type (Cottonwood-Pine or Cottonwood/Willow).

[illegible]

Table XXIII. Field Data values, Habitat Evaluation Procedure model Suitability Indices (SI) and overall Habitat Suitability Indices (HSI) for Mink (Riverine Habitat)

	% year with surface water present		% tree/shrub canopy cover within 328 ft		
	value	SI	value	SI	HSI
Amerigas	100	1.0	34.9	.519	804
Bridge	100	1.0	52.4	.729	900
Granite	100	1.0	52.4	.729	900
Martis	100	1.0	6.2	.174	556
Boca	100	1.0	25.0	.400	.737
Reach 1					**.780**
Farad	100	1.0	51.6	.719	.696
Verdi	100	1.0	64.2	.870	.955
Reach 2					**.926**
Oxbow	100	1.0	66.4	.897	.964
Spice I	100	1.0	22.1	.365	.715
Reach 3					**.840**
Clark	100	1.0	26.6	.419	.748
Reach 4					**.748**
Powerline	100	1.0	24.5	.394	.733
Reach 6					.733

[illegible]

[illegible]

[illegible] **Table XXV**.

Table XXIV. Field Data values, Habitat Evaluation Procedure model Suitability Indices (SI) and overall Habitat Suitability Indices (HSI) for Muskrat (Riverine Habitat)

	%year with surface water present	% emergent herbaceous vegetation		% stream gradient		% Herbaceous canopy cover within 10m of waters edge		% channel with surface during minimum flow		
	cover value	SI	food val	SI	cover value	SI	food value	SI	cover value	SI	HSI
Amergas	100	1.0	0 .2		-	1.0	46.2	.462	0.89	0.89	0.43
Bridge	100	1.0	0 .2		-	1.0	38.8	.388	0.89	0.89	0.39
Granite	100	1.0	0 .2		.528	1.0	68.3	.683	0.89	0.89	0.54
Marks	100	1.0	0 .2		-	1.0	31	.031	0.75	0.75	0.22
Boca	100	1.0	0 .2		-	1.0	41.2	.412	0.75	0.75	0.41
Reach 1											**0.40**
Farad	100	1.0	0 .2		587	1.0	6.3	.063	0.85	0.85	0.23
Verdi	100	1.0	0 .2		.608	1.0	45.8	.458	0.85	0.85	0.43
Reach 2											**0.33**
Oxbow	100	1.0	0 .2		602	1.0	16.9	.169	0.84	0.84	0.28
Spice I	100	1.0	0 .2		-	1.0	71.2	.712	0.88	0.84	0.56
Reach 3											**0.42**
Clark	100	1.0	0 .2		.494	1.0	50.8	.508	0.88	0.88	0.45
Reach 4											**0.45**
Powerline	100	1.0	10 .28		411	1.0	67.2	.672	0.50	0.50	0.50
Reach 6											**0.50**

Table XXV. Field Data values, Habitat Evaluation Procedure model Suitability Indices (SI) and overall Habitat Suitability Indices (HSI) for Sage Thrasher (Upland Sage Habitat).

	% Canopy cover		Average height		scrub type	
	value	SI	value	SI	SI	HSI
Amergas	0	0	0	0	1.0	0
Bridge	17.5	350	no data	1.0	1.0	592
Granite	36.1	722	no data	1.0	1.0	850
Marks	21.2	424	34.3	.549	1.0	615
Boca	19.2	384	>60	1.0	1.0	620
Reach 1						**535**
Farad	28.4	568	47	.752	1.0	753
Verdi	4.1	.081	47est	.752	1.0	285
Reach 2						**.519**
Oxbow	0	0	0	0	1.0	0
Spice I.	27.3	.546	47	752	1.0	739
Reach 3						**.370**
Clark	31.3	626	>60	1.0	1.0	791
Reach 4						**.791**
Powerline	5.4	108	73.3	1.0	1.0	329
Reach 6						**.329**

LITERATURE CITED

Allen, Mary [illegible] and Will Gorda. 1990. Biological evaluation of the Black Canyon of the Gunnison, Colorado: Jump with a water pipeline to control hydrocarbon contamination caused by a diesel oil release. Report to the National Park Service, Water Resources, Div. Water and Ecological Services, National Ecology Research Center, Fort Collins, CO. 9 pp.

Armstrong, D. [illegible] Hydrogeology of Bonga Flat and its relation to flow and quality problems in the Tincup Basin. Unpublished M.S. thesis, University of Montana, Butte. 87 pp.

Bisson, P.A., W.S. Hopkins, and S.V. Gregory. 1981. Water velocity selection by juvenile salmonids in stream environments. Proceedings of Applied Warmwater Fisheries Symposium.

California Department of Water Resources. 1979. Tinemaha Creek Area Groundwater Investigation. 30 pp.

Gibson, D. 1981. Effects on stream ecology after the reconstruction of upstream powerplants. North Pacific Power Corporation and Portland, OR. 120 pp.

Gregory, S.V., W.R. Meehan, and R.W. Narver. 1991. Influence of Populations within River Ecosystems. Journal of Range Management 44(2):179-190.

Hauer, F. Richard, W.W. Dodds, K.R. Matthews, and W.M. Lewis, Jr. 1988. A handbook of the methods for studying benthic algal communities. Unpublished manuscript. Colorado Cooperative Fish and Wildlife Research Unit, Colorado State University, Fort Collins, CO. 87 pp.

Hynes, H.B.N. 1970. The ecology of stream insects. Annual Review of Entomology 15:25-42.

Kier, W.M., and W.W. Dodds. 1976. Diversity and biomass of algae on a perennially wetted prairie stream. Journal of Phycology 12:45-50.

Mangum, C.P. 1964. Respiratory adaptations in intertidal annelids. Comparative Biochemistry and Physiology 11:529-541.

Minshall, G.W., and W.W. Minckley. 1979. Ecological studies of Yellowstone streams. Proceedings of the Montana Academy of Sciences 38:1-18.

Mount, D.I., and C.E. Stephan. 1967. A method for establishing acceptable toxicant limits for fish - malathion and the butoxyethanol ester of 2,4-D. Transactions of the American Fisheries Society 96:185-193.

Nelson, D.J., F.T. Mavis, R.W. Stiffler, and B.G. Armitage. 1977. Effect of coal mine effluents on stream insect communities. Water Research 11:133-141.

Platts, W.S. 1979. Livestock grazing and riparian/stream ecosystems. Proceedings of the Forest Livestock Interactions Symposium. 173-183.

Hall, Susan. 1984. "Formulation of Decision." In press by J. Wilkinson & Sons, Berkeley.

Hall, Susan. 1987. "Willow and wetland in the history of herbal in Japanese rock." Multinational Journal 11: 1-231.

Hamilton, Peter. [illegible] "Medical Materials" in rural plants: notes and letters. Introduction of Old Farm & Press. Berkeley and Los Angeles: [illegible] pp.

Hall, Susan. 1975. "WILLOWCAN: A PROGRAM to analyze the distribution of multivariate data on a computer terminal by classification." Plant Statistical Laboratory. Internal Memorandum. 87 pp.

Williams, Jeff. 1985. "Preliminary description of the historical distribution of Willowcan." Wild Area Department of the Bay Area Survey, Berkeley, CA. 145 pp.

Phillips, Peter. 1981. "Manual of the Pacific Oceans." Journal of Malacology Press, Portland, OR.

Green and Black's Australasian Atlas. 1990. "Coastal study of the Australian Bight." In "Flora" a review of the common plants. Berkeley: Natural Resources Conservation Service, Soil Survey Div. Digital Data Processing Section.

Thomas, R.W., "Life, the Book, and Our Work." Paper presented at the Annual Meeting of Microbiology and Molecular Ecology. Water Conservation: The Ecological Issues. 23 pp.

Mitchell, S.M., J.W. Webb, Bill Allen, and T. Johnson. 1987. "Soil survey of Imperial Valley, California: the effects of flow rate and salinity on vegetative cover." Journal of Ecology, 75: 1-23. Soil Conservation Publication 1123-1671.

Jackson, Mary Ann and Peter Reynolds. 1993. Ornithological Ecology. 4th Edn. New York: W.H. Freeman.

McMahon, Bill. 1991. "Examination of water quality and groundwater flow: Water in Agricultural Areas." Report prepared for the Tularosa Basin Survey, California and Nevada. Unpublished Manuscript, University of Nevada, Reno. 31 pp.

Pielou, E.C. 1977. Mathematical Ecology. John Wiley & Sons, New York, NY. 385 pp.

Wood, D.W., 2001. Pollination and honey bee conservation. Annual review of entomology, 46(1), pp.1-37.

Wright, G.A., Baker, D.D., Palmer, M.J., Stabler, D., Mustard, J.A., Power, E.F., Borland, A.M. and Stevenson, P.C., 2013. Caffeine in floral nectar enhances a pollinator's memory of reward. Science, 339(6124), pp.1202-1204.

Wright, G.A., Mustard, J.A., Simcock, N.K., Ross-Stewart, A.L., Hunter, G., Lei, H. and Buckmaster, D.R., 2015. Parallel reinforcement pathways for conditioned food aversions in the honeybee. Journal of Experimental Biology, 218(6), pp.964-973.

Yang, E.C., Chuang, Y.C., Chen, Y.L. and Chang, L.H., 2008. Abnormal foraging behavior induced by sublethal dosage of imidacloprid in the honey bee (Hymenoptera: Apidae). Journal of economic entomology, 101(6), pp.1743-1748.

Yang, E.C., Chuang, Y.C., Chen, Y.L. and Chang, L.H., 2008. Abnormal foraging behavior induced by sublethal dosage of imidacloprid in the honey bee (Hymenoptera: Apidae). Journal of economic entomology, 101(6), pp.1743-1748.

Yang, E.C., Chuang, Y.C., Chen, Y.L. and Chang, L.H., 2008. Abnormal foraging behavior induced by sublethal dosage of imidacloprid in the honey bee (Hymenoptera: Apidae). Journal of economic entomology, 101(6), pp.1743-1748.

[illegible] Roy [illegible] M. Wilkerson. [illegible] Fresh water habitats for Indiana [illegible] ecology [illegible] Relative biomass between Pyramid Lake and Walker Drainage [illegible] Water for Survival, Inc., Land of Lincoln, Salem, Ind. [illegible] pp.

[illegible] Water Quality Study. [illegible] Water Pollution Control Division, Water Resources [illegible]

[illegible] Corporation. [illegible] Scotland. Its [illegible] proposed operations [illegible] and [illegible]. U.S. Department of [illegible] Bureau of Water [illegible]. Draft Report on water [illegible] Standards. [illegible] pages [illegible].

Automatic [illegible] Inc. Technical Publications [illegible].

Water [illegible] [illegible] Publishing [illegible]. [illegible] Publications [illegible] [illegible] report [illegible] on [illegible] Fresh Water Ecology [illegible] Project [illegible] by the U.S. Army Corps of Engineers, Sacramento District. [illegible] pp.

Wolf [illegible], W.R., and W.D. Whitman. [illegible]. Preliminary [illegible] of [illegible] [illegible] streams. Ohio [illegible] Highway [illegible] Engineering Experiment Station, Ohio.

Wilson, W. [illegible] al. A Decision Tool for [illegible] Wetland Systems for [illegible] Waters. Unpublished M.S. [illegible], University of Nevada, Reno. [illegible] pp.

Table RIPARIAN 1. Mean monthly flows (cfs) in the Truckee River at Donner Creek, based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 75 cfs are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	1577	1662	1256	547	442	455	340	823	778	518	173	110	223	260
NA	1504	1516	1252	543	441	456	347	802	762	517	174	112	226	270
LWSA	1504	1516	1252	543	442	456	348	803	763	516	174	112	228	271
TROA	1534	1546	1293	544	329	307	309	621	855	551	215	116	137	202

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	275	280	158	90	68	69	23	227	293	133	63	28	44	5
NA	273	282	158	89	67	73	29	229	253	130	60	24	34	12
LWSA	273	282	158	89	66	72	31	229	253	130	61	24	32	14
TROA	272	391	247	105	68	61	41	201	260	142	64	22	35	21

Table RIPARIAN 2. Mean monthly flows (cfs) in the Truckee River at the Little Truckee River based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 100 cfs are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	2489	3329	2213	907	657	572	697	865	1319	1051	510	553	502	482
NA	2396	3265	2195	894	590	549	773	847	1277	1012	588	520	458	526
LWSA	2397	3264	2196	893	590	549	775	849	1277	1010	586	520	458	526
TROA	2507	3405	2269	698	531	464	663	658	1315	1022	542	479	450	512

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	527	774	626	502	444	320	202	478	553	472	394	186	135	77
NA	551	741	611	518	446	347	201	474	548	512	406	219	99	90
LWSA	551	741	611	519	447	344	199	476	546	515	402	217	96	91
TROA	511	699	575	472	438	376	235	476	516	517	417	267	187	135

Table RIPARIAN 3. Mean monthly flows (cfs) in the Trophy Reach of the Truckee River based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 200 cfs are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	2513	3216	2077	812	607	525	691	853	1235	968	553	506	450	477
NA	2400	3147	2091	833	573	542	777	836	1189	958	555	500	482	528
LWSA	2401	3147	2091	833	573	542	779	839	1189	953	555	500	482	528
TROA	2508	3346	2168	806	532	486	680	905	1246	986	532	482	452	516

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	524	748	555	441	400	297	204	500	516	407	352	170	137	84
NA	522	710	575	492	443	354	209	492	506	471	388	224	104	102
LWSA	523	710	575	492	441	350	207	492	506	473	385	221	101	102
TROA	520	665	562	465	450	402	248	491	491	493	413	294	195	149

Table RIPARIAN 4. Mean monthly flows (cfs) in the Mayberry Reach of the Truckee River based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 200 cfs are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	2519	3194	2037	776	543	495	663	836	1202	924	535	445	419	449
NA	2394	3107	2040	795	523	496	746	807	1136	907	500	450	435	494
LWSA	2396	3107	2040	794	523	496	747	806	1135	902	500	450	435	494
TROA	2500	3299	2128	616	484	443	649	864	1194	934	486	436	408	482

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	494	678	496	366	320	228	152	450	458	334	260	111	87	45
NA	499	659	522	443	393	317	187	453	455	420	348	193	88	80
LWSA	490	662	521	443	392	312	183	452	455	422	345	191	84	80
TROA	498	636	511	427	406	366	222	445	441	445	370	257	162	125

Table RIPARIAN 5. Mean monthly flows (cfs) in the Oxbox Reach of the Truckee River based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 200 cfs (Aug-Sep) or 100 cfs (Oct) are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	2540	3096	1936	686	429	371	628	672	1099	816	398	346	319	400
NA	2348	3039	1942	709	429	392	688	735	1056	805	404	357	333	430
LWSA	2346	3039	1942	706	429	393	685	735	1055	802	404	356	333	430
TROA	2460	3242	2056	750	407	382	595	796	1132	852	406	369	323	420

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	477	621	396	286	229	167	147	434	368	259	212	68	68	33
NA	417	576	416	347	304	227	142	372	373	324	264	139	49	37
LWSA	410	576	416	346	303	223	138	371	373	324	261	138	49	36
TROA	427	574	427	345	334	291	166	367	379	356	302	199	97	74

Table RIPARIAN 6. Mean monthly flows (cfs) in the Spice Reach of the Truckee River based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 150 cfs (Aug-Sep) or 100 cfs (Oct) are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	2518	3062	1897	638	396	326	601	790	1002	774	347	304	275	372
NA	2308	2965	1865	633	355	359	654	690	980	728	336	282	280	394
LWSA	2306	2964	1865	632	355	359	650	694	979	724	335	281	280	394
TROA	2461	3175	1984	682	336	318	561	776	1062	780	340	300	275	386

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	455	579	355	235	180	120	125	408	348	224	167	35	41	13
NA	369	500	336	270	235	181	115	331	298	251	195	90	28	12
LWSA	368	500	336	271	235	177	213	329	298	250	192	89	29	12
TROA	402	505	354	275	273	252	133	347	311	296	238	143	62	44

Table RIPARIAN 7. Mean monthly flows (cfs) in the Lockwood Reach of the Truckee River based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended ecosystem flows (Truckee River Recovery Implementation Team, 2003) are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	2710	3164	1980	732	456	391	693	884	1142	635	405	370	339	434
NA	2527	3092	1949	722	422	401	729	825	1054	785	374	339	338	460
LWSA	2525	3092	1949	721	422	400	729	823	1054	784	374	338	337	460
TROA	2689	3264	2041	784	401	391	651	910	1152	846	391	360	330	452

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	531	634	410	293	242	199	182	467	402	277	218	85	85	83
NA	454	565	395	322	288	246	190	411	363	309	243	141	83	79
LWSA	452	565	394	322	288	242	177	409	363	309	241	141	82	79
TROA	496	566	409	322	323	306	207	420	371	353	289	196	115	114

Table RIPARIAN 8. Mean monthly flows (cfs) below Derby Dam on the Truckee River based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended ecosystem flows (Truckee River Recovery Implementation Team, 2003) are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	2692	3092	1906	826	330	300	674	621	1012	687	300	200	245	396
NA	2514	3055	1889	647	330	338	711	745	1000	557	300	264	291	429
LWSA	2512	3054	1889	646	300	338	710	743	1000	556	300	265	291	429
TROA	2656	3224	1979	890	300	300	631	803	1041	748	300	262	284	432

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	200	300	170	120	109	100	100	60	85	67	50	27	49	25
NA	200	300	170	120	110	108	109	73	110	127	83	79	99	35
LWSA	200	300	170	120	110	106	109	73	110	127	83	79	30	35
TROA	200	300	170	120	122	104	104	124	108	137	118	110	70	58

Table RIPARIAN 9. Mean monthly flows (cfs) in Donner Creek based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 8 cfs are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	119	141	140	20	3	54	64	72	49	35	3	3	49	20
NA	119	141	140	20	3	54	67	72	49	35	3	3	49	22
LWSA	119	141	140	20	3	54	67	72	49	35	3	3	48	22
TROA	119	141	140	20	7	10	72	72	49	35	8	8	50	50

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	25	8	2	2	2	4	3	19	2	2	2	2	2	3
NA	25	8	2	2	2	3	5	19	2	2	2	2	2	3
LWSA	25	8	2	2	2	3	6	19	2	2	2	2	2	3
TROA	25	7	3	3	3	10	25	18	2	3	3	3	8	18

Table RIPARIAN 10. Mean monthly flows (cfs) in Prosser Creek based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 16 cfs are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	172	510	215	237	144	32	329	72	82	121	72	11	8	90
NA	172	510	234	202	122	32	341	72	84	114	60	12	8	139
LWSA	172	510	231	202	122	38	341	72	84	114	60	12	8	138
TROA	186	512	187	96	67	159	301	72	68	111	46	16	45	189

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	5	51	37	10	5	6	7	5	16	21	8	5	5	7
NA	5	45	25	5	5	5	8	5	22	16	5	5	5	7
LWSA	5	45	26	5	5	5	8	5	22	15	5	5	5	7
TROA	7	27	35	15	10	11	12	5	18	18	10	8	8	9

Table RIPARIAN 11. Mean monthly flows (cfs) in Independence Creek based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 6 cfs (Apr-Jul), 4 cfs (Aug-Sep), or 7 cfs (Oct) are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	66	91	105	54	23	32	28	34	53	44	17	4	19	50
NA	65	91	105	56	23	33	27	34	52	42	17	3	18	136
LWSA	65	91	105	52	23	33	27	34	52	42	17	3	18	136
TROA	65	91	103	50	21	29	31	33	52	45	16	10	12	189

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	6	16	5	2	2	2	9	3	7	6	2	2	2	4
NA	4	14	3	2	2	2	11	2	5	3	2	2	2	7
LWSA	4	14	3	2	2	2	11	2	5	3	2	2	2	7
TROA	5	16	6	6	5	8	9	4	6	8	5	3	7	7

Table RIPARIAN 12. Mean monthly flows (cfs) in Little Truckee River above Stampede Reservoir based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 35 cfs (Apr-Jul), 14 cfs (Aug-Sep), or 30 cfs (Oct) are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	363	713	710	195	38	43	43	213	428	279	40	14	26	26
NA	363	713	710	195	40	46	44	212	428	279	42	13	26	27
LWSA	363	713	710	195	41	46	44	212	428	279	43	13	26	26
TROA	363	713	710	195	39	44	50	214	428	279	45	19	19	25

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	74	167	55	8	5	7	16	58	105	53	6	3	6	11
NA	74	163	58	7	4	7	17	58	105	51	5	3	8	14
LWSA	74	163	58	7	4	7	17	58	105	51	5	3	6	13
TROA	76	163	62	11	9	12	17	64	113	34	9	8	10	13

Table RIPARIAN 13. Mean monthly flows (cfs) in Little Truckee River below Stampede Reservoir based on model results in wet, median, dry, and extremely dry hydrologic conditions. Shaded boxes indicate when recommended minimum flows of 45 cfs are not met.

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	547	910	563	277	179	89	279	284	330	264	144	94	30	30
NA	559	891	555	242	160	76	321	292	356	265	138	75	30	30
LWSA	559	891	555	242	160	76	320	293	359	265	138	74	30	30
TROA	529	973	483	200	161	125	340	233	314	225	122	85	45	43

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	64	48	30	54	30	30	30	50	34	30	31	30	30	30
NA	62	48	30	74	30	30	30	46	34	30	53	30	30	30
LWSA	62	48	30	74	30	30	30	46	34	30	54	30	30	30

Table RIPARIAN 14. No Action, LWSA, and TROA flow compared to current conditions in the Lake Tahoe to Donner Creek reach based on model results for wet, median, dry and extremely dry hydrologic conditions.(ND=No Difference, NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
LWSA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	24.3%	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	ND	NS	NS	-46.0%	26.1%	NS	ND	NS	NS	NS	-22.7%	140.0%
LWSA	NS	NS	ND	NS	NS	-19.1%	34.8%	NS	ND	NS	NS	NS	-27.9%	180.0%
TROA	NS	35.3%	56.3%	16.7%	ND	-31.5%	78.3%	NS	NS	NS	NS	-15.4%	-20.6%	320.0%

Table RIPARIAN 15. No Action, LWSA, and TROA flows compared to current conditions in the Truckee River in the Donner Creek to Little Truckee River reach based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	NS	10.9%	NS	NS	NS	NS	NS	NS	NS
LWSA	NS	NS	NS	NS	NS	NS	11.2%	NS	NS	NS	NS	NS	NS	NS
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	17.7%	-26.7%	16.9%
LWSA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16.7%	-29.6%	18.2%
TROA	NS	NS	NS	NS	NS	16.4%	16.3%	NS	NS	NS	NS	54.3%	38.5%	75.3%

Table RIPARIAN 16. No Action, LWSA, and TROA flows compared to current conditions in the Trophy reach of the Truckee River based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	NS	12.4%	NS	NS	NS	NS	NS	NS	10.7%
LWSA	NS	NS	NS	NS	NS	NS	12.7%	NS	NS	NS	NS	NS	NS	10.7%
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	11.6%	10.8%	19.2%	NS	NS	NS	15.7%	10.2%	31.8%	-24.1%	21.4%
LWSA	NS	NS	NS	11.6%	10.3%	17.8%	NS	NS	NS	16.2%	NS	30.0%	-26.3%	21.4%
TROA	NS	NS	NS	NS	12.5%	35.4%	21.6%	NS	NS	21.1%	17.3%	72.9%	42.9%	77.4%

Table RIPARIAN 17. No Action, LWSA, and TROA flows compared to current conditions in the Mayberry reach of the Truckee River based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference, NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	ND	12.5%	NS	NS	NS	NS	NS	NS	10.3%
LWSA	NS	NS	NS	NS	NS	ND	12.7%	NS	NS	NS	NS	NS	NS	10.3%
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	21.0%	22.8%	39.0%	15.4%	NS	NS	25.7%	24.3%	73.9%	NS	77.8%
LWSA	NS	NS	NS	21.0%	22.5%	36.8%	13.0%	NS	NS	26.3%	23.2%	72.1%	NS	77.8%
TROA	NS	NS	NS	19.0%	26.6%	60.5%	37.0%	NS	NS	33.2%	32.1%	131.6%	86.2%	177.8%

Table RIPARIAN 18. No Action, LWSA, and TROA flows compared to current conditions in the Oxbow reach of the Truckee River based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
LWSA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	21.3%	32.8%	35.9%	NS	NS	NS	20.9%	24.5%	104.4%	-27.9%	12.1%
LWSA	NS	NS	NS	21.0%	32.3%	33.5%	NS	NS	NS	20.9%	23.1%	102.9%	-27.9%	NS
TROA	NS	NS	NS	20.6%	45.9%	74.3%	12.2%	NS	NS	36.6%	41.5%	192.6%	42.6%	124.2%

Table RIPARIAN 19. No Action, LWSA, and TROA flows compared to current conditions in the Spice reach of the Truckee River based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant)

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
LWSA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	14.5%	10.9%	NS	NS	19.0%	32.3%	NS	-12.0%	NS	11.6%	11.6%	65.9%	NS	25.4%
LWSA	14.9%	10.9%	NS	NS	19.0%	30.1%	NS	-12.4%	NS	11.6%	10.6%	65.9%	NS	25.4%
TROA	NS	10.7%	NS	NS	33.5%	64.5%	19.7%	-10.1%	NS	27.4%	32.6%	130.6%	35.3%	61.0%

Table RIPARIAN 20. No Action, LWSA, and TROA flows compared to current conditions in the Lockwood reach of the Truckee River based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant)

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
LWSA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	14.9%	26.3%	50.8%	NS	NS	NS	12.1%	16.8%	167.1%	-31.7%	NS
LWSA	NS	NS	NS	15.3%	26.3%	47.5%	70.4%	NS	NS	11.6%	15.0%	154.3%	-29.3%	NS
TROA	NS	NS	NS	17.0%	46.8%	110.0%	NS	NS	NS	33.5%	42.5%	305.6%	51.2%	238.5%

Table RIPARIAN 21. No Action, LWSA, and TROA flows compared to current conditions in reaches 14-15 (below Derby Dam) of the Truckee River based on operation model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	ND	12.7%	NS	NS	NS	NS	ND	32.0%	18.3%	NS
LWSA	NS	NS	NS	NS	ND	12.7%	NS	NS	NS	NS	ND	32.5%	18.3%	NS
TROA	NS	NS	NS	10.2%	ND	NS	NS	NS	NS	12.1%	ND	31.0%	15.4%	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	ND	ND	ND	ND	NS	NS	NS	21.7%	29.4%	122.8%	66.0%	192.6%	-40.8%	40.0%
LWSA	ND	ND	ND	ND	NS	NS	NS	21.7%	29.4%	122.8%	66.0%	192.6%	-38.8%	40.0%
TROA	ND	ND	ND	ND	11.8%	NS	NS	108.7%	27.1%	140.4%	136.0%	307.4%	42.9%	124.0%

Table RIPARIAN 22. No Action, LWSA, and TROA flows compared to current conditions between Donner Lake and the Truckee River based on operation model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.0%
LWSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.0%
TROA	ND	ND	ND	ND	133.3%	ND	ND	ND	ND	ND	100.0%	100.0%	ND	150.0%

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	ND	ND	ND	ND	ND	-25.0%	66.7%	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	-25.0%	100.0%	ND	ND	ND	ND	ND	ND	ND
TROA	ND	-12.5%	60.0%	60.0%	50.0%	150.0%	733.3%	ND	ND	50.0%	50.0%	50.0%	350.0%	500.0%

Table RIPARIAN 23 No Action, LWSA, and TROA flows as compared to current conditions between Prosser Reservoir and the Truckee River based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND–No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	ND	ND	NS	NS	NS	ND	NS	ND	NS	NS	NS	NS	ND	53.3%
LWSA	ND	ND	NS	NS	NS	ND	NS	ND	NS	NS	NS	NS	ND	53.3%
TROA	NS	NS	NS	NS	NS	393.8%	NS	ND	NS	NS	NS	45.5%	462.5%	110.0%

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	ND	NS	NS	50.0%	ND	ND	14.3%	ND	37.5%	NS	37.5%	ND	ND	ND
LWSA	ND	NS	NS	50.0%	ND	ND	14.3%	ND	37.5%	NS	37.5%	ND	ND	ND
TROA	40.0%	NS	NS	10.0%	100.0%	120.0%	71.4%	ND	12.5%	NS	25.0%	60.0%	60.0%	28.6%

Table RIPARIAN 24. No Action, LWSA, and TROA flows as compared to current conditions between Independence Lake and the Little Truckee River based on operation model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant)

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	ND	ND	ND	NS	ND	NS	NS	ND	NS	NS	ND	-25.0%	NS	53.3%
LWSA	ND	ND	ND	NS	ND	NS	NS	ND	NS	NS	ND	-25.0%	NS	53.3%
TROA	ND	ND	NS	NS	NS	NS	10.7%	NS	NS	NS	NS	150.0%	NS	110.0%

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	-33.3%	NS	-40.0%	ND	ND	ND	22.2%	-33.3%	-28.6%	-40.0%	ND	ND	ND	75.0%
LWSA	-33.3%	NS	-40.0%	ND	ND	ND	22.2%	-33.3%	-28.6%	-40.0%	ND	ND	ND	75.0%
TROA	-16.7%	ND	60.0%	200.0%	150.0%	300.0%	ND	33.3%	14.3%	60.0%	150.0%	50.0%	250.0%	75.0%

Table RIPARIAN 25. No Action, LWSA, and TROA flows in the Little Truckee River from Independence Creek to Stampede Reservoir compared to current conditions based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	ND	ND	ND	ND	NS	NS	NS	NS	ND	ND	NS	NS	ND	NS
LWSA	ND	ND	ND	ND	NS	NS	NS	NS	ND	ND	NS	NS	ND	NS
TROA	ND	ND	ND	ND	NS	NS	15.3%	NS	ND	ND	12.5%	28.6%	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	ND	NS	NS	-12.5%	NS	ND	NS	ND	ND	NS	-16.7%	ND	20.0%	27.3%
LWSA	ND	NS	NS	-12.5%	NS	ND	NS	ND	ND	NS	-16.7%	ND	ND	18.2%
TROA	NS	NS	12.7%	37.5%	80.0%	71.4%	NS	10.3%	NS	NS	50.0%	166.7%	100.0%	18.2%

Table RIPARIAN 26. No Action, LWSA, and TROA flows as compared to current conditions between Stampede Reservoir and the Truckee River based on operation model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	NS	NS	NS	NS	NS	15.1%	NS	NS	NS	NS	NS	ND	ND
LWSA	NS	NS	NS	NS	NS	NS	14.7%	NS	NS	NS	NS	NS	ND	ND
TROA	NS	NS	NS	NS	NS	56.3%	21.9%	NS	NS	NS	NS	NS	50.0%	43.3%

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
CC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NA	NS	ND	ND	37.0%	ND	ND	ND	NS	ND	ND	71.0%	ND	ND	ND
LWSA	NS	ND	ND	37.0%	ND	ND	ND	NS	ND	ND	74.2%	ND	ND	ND
TROA	NS	14.6%	70.0%	NS	50.0%	50.0%	60.0%	NS	32.4%	50.0%	45.2%	50.0%	50.0%	43.3%

Table RIPARIAN 27. LWSA, and TROA flows compared to No Action flows between Lake Tahoe and Donner Creek based on operation model results for wet, median, dry and extremely dry hydrologic conditions (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	NS	ND	NS	NS	NS	NS	ND	ND	NS	NS
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	23.6%	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	NS	NS	NS	ND	ND	ND	NS	ND	NS	18.7%
TROA	NS	38.7%	56.3%	18.0%	NS	-16.4%	41.4%	NS	NS	NS	NS	NS	NS	75.0%

Table RIPARIAN 28. LWSA, and TROA flows compared to No Action flows in the Truckee River from Donner Creek to the confluence of the Little Truckee River (reach 7) based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	NS	NS	NS	ND	ND	NS	NS	ND	NS	ND	ND	ND	NS
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	NS	NS	NS	NS	NS	ND	NS	NS	NS	NS	NS
TROA	NS	NS	NS	NS	NS	NS	16.9%	NS	NS	NS	NS	31.1%	66.9%	50.0%

Table RIPARIAN 29. LWSA, and TROA flows compared to No Action flows in the Trophy reach of the Truckee River (reach 9 based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference, NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	ND	ND	ND	ND	ND	NS	NS	ND	NS	ND	ND	ND	NS
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	ND	ND	ND	NS	NS	NS	ND	ND	NS	NS	NS	NS	ND
TROA	NS	NS	NS	NS	NS	13.6%	16.7%	NS	NS	NS	NS	31.3%	87.5%	46.1%

Table RIPARIAN 30. LWSA, and TROA flows compared to No Action flows in the Mayberry reach of the Truckee River (reach 10) based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	NS	NS	ND	NS	NS	ND	NS	ND	ND	ND	ND
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	NS	NS	ND	NS	NS	NS	NS	ND	NS	NS	NS	NS	ND
TROA	NS	NS	NS	NS	NS	15.5%	16.7%	NS	NS	NS	NS	33.2%	88.4%	56.3%

Table RIPARIAN 31. LWSA, and TROA flows compared to No Action flows in the Oxbow reach of the Truckee River (reach 11) based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	NS	ND	NS	NS	NS	NS	NS	ND	NS	ND	ND
TROA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	ND	ND	NS	NS	NS	NS	NS	ND	ND	NS	NS	ND	NS
TROA	NS	NS	NS	NS	NS	28.2%	16.2%	NS	NS	13.0%	13.6%	43.2%	96.0%	100.0%

Table RIPARIAN 32. LWSA, and TROA flows compared to No Action flows in the Spice reach of the Truckee River (reach 12) based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference, NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	NS	ND	NS	ND	NS	NS	NS	NS	NS	ND	NS	ND	ND
TRDA	NS	NS	NS	NS	NS	NS	NS	11.5%	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	ND	ND	NS	ND	NS	85.2%	NS	ND	NS	NS	NS	NS	NS
TROA	NS	NS	NS	NS	16.2%	139.2%	15.7%	NS	NS	19.1%	22.1%	58.9%	121.4%	268.7%

Table RIPARIAN 33. LWSA, and TROA flows compared to No Action flows in the Lockwood reach (reach 13) based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	ND	ND	NS	ND	NS	ND	NS	ND	NS	ND	NS	NS	ND
TROA	NS	NS	NS	NS	NS	NS	NS	10.3%	NS	NS	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	ND	NS	ND	ND	NS	NS	NS	ND	ND	NS	ND	NS	ND
TROA	NS	NS	NS	ND	12.2%	24.4%	16.0%	NS	NS	14.2%	18.8%	39.0%	42.0%	44.3%

Table RIPARIAN 34. LWSA, and TROA flows compared to No Action flows in reaches 14 and 15 (below Derby Dam) based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	NS	NS	ND	NS	ND	ND	NS	NS	ND	NS	ND	NS	ND	ND
TROA	NS	NS	NS	NS	NS	NS	NS	11.8%	NS	13.9%	NS	NS	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND
TROA	ND	ND	ND	ND	10.9%	NS	NS	69.9%	NS	NS	42.2%	39.2%	141.4%	60.0%

Table RIPARIAN 35. LWSA, and TROA flows compared to No Action flows between Donner Lake and the Truckee River based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference, NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TROA	ND	ND	ND	ND	133.3%	ND	ND	ND	ND	ND	100.0%	100.0%	ND	127.3%
	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	ND	20.0%	ND	ND	ND	ND	ND	ND	ND
TROA	ND	-12.5%	50.0%	50.0%	50.0%	233.3%	400.0%	ND	ND	50.0%	50.0%	50.0%	350.0%	500.0%

Table RIPARIAN 36. LWSA, and TROA flows compared to No Action flows between Prosser Reservoir and the Truckee River based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TROA	NS	NS	NS	NS	NS	393.8%	NS	ND	NS	NS	NS	33.3%	462.5%	37.0%
	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TROA	40.0%	NS	NS	120.0%	100.0%	120.0%	50.0%	ND	NS	20.0%	100.0%	60.0%	60.0%	25.0%

Table RIPARIAN 37. LWSA, and TROA flows from Independence Lake to the confluence of the Little Truckee River compared to No Action flows based on model results for wet, median, dry and extremely dry hydrologic conditions (ND–No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TROA	ND	ND	NS	NS	NS	NS	14.6%	NS	ND	NS	NS	233.3%	NS	37.0%

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TROA	25.0%	NS	166.7%	200.0%	150.0%	300.0%	NS	100.0%	60.0%	166.7%	150.0%	150.0%	250.0%	ND

Table RIPARIAN 38. LWSA, and TROA flows in Little Truckee River from Independence Creek to Stampede Reservoir compared to No Action flows based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND–No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	NS	ND	ND	NS
TROA	ND	ND	ND	ND	NS	NS	13.6%	NS	ND	ND	NS	38.5%	NS	NS

	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS
TROA	NS	ND	NS	57.1%	125.0%	71.4%	ND	10.3%	NS	NS	80.0%	166.7%	166.7%	NS

Table RIPARIAN 39. LWSA and TROA flows in Little Truckee River from Stampede Reservoir to the Truckee River compared to No Action flows based on model results for wet, median, dry and extremely dry hydrologic conditions. (ND=No Difference; NS = Not Significant).

	Wet							Median						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA		ND	ND	ND	ND	ND	NS	NS	NS	ND	ND	NS	ND	ND
TROA	NS	NS	NS	NS	NS	64.5%	NS	NS	NS	NS	NS	13.3%	50.0%	43.3%
	Dry							Extremely Dry						
	Apr	May	Jun	Jul	Aug	Sep	Oct	Apr	May	Jun	Jul	Aug	Sep	Oct
NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LWSA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND
TROA	11.3%	14.6%	70.0%	NS	50.0%	50.0%	60.0%	19.6%	32.4%	50.0%	-15.1%	50.0%	50.0%	43.3%